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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,246	10/09/2001	Sami Mangoubi	26/414	3978

7590 02/25/2005

DR. MARK FRIEDMAN LTD.
C/O Bill Polkinghorn
Discovery Dispatch
9003 Florin Way
Upper Marlboro, MD 20772

EXAMINER	
SONG, HOON K	

ART UNIT	PAPER NUMBER
2882	

DATE MAILED: 02/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/972,246	MANGOUBI, SAMI	
	Examiner	Art Unit	
	Hoon Song	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,13,14 and 38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,13,14 and 38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

In response to applicant's communication dated 08/18/2004 regarding the last Office action, the following corrective action is taken.

The period for reply of 3 MONTHS set in said Office Action is restarted to begin with the mailing date of this letter.

A corrected copy of the last Office Action is enclosed.

Upon reconsideration, new references were discovered, and a new interpretation of Macken (US 5,128,953) was applied. New rejections based on these references are included below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6-8 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Macken (US 5128953).

Regarding claim 1, Macken teaches an optical window assembly comprising:

(a) an outer window (11);

(b) an inner window (12);

(c) a housing (18,19), wherein said outer window (11) and said inner window (12) are mounted, said housing (18,19) holding said outer window (11) and said inner

window (12) apart, thereby forming an intervening space (13) between said outer window (11) and said inner window (12).

(d) a coolant (column 2 line 63) occupying said intervening space; and

(e) a mechanism (23, 24) for cooling said coolant.

Regarding claim 6, Macken teaches that said outer window (11) includes an outer surface facing away from said inner window and an inner surface facing towards said inner window, wherein said inner window (12) includes an outer surface facing towards said outer window and an inner surface facing away from said outer window, and wherein at least one of said surfaces is coated with an antireflective coating (column 2 line 50-51).

Regarding claim 7, Macken teaches said inner surface of said outer window and said outer surface of said inner window are coated with said anti-reflective coating (column 2 line 50-51).

Regarding claim 8, Macken teaches said anti-reflective coating is heat resistant (since the Macken's anti-reflector is used in heated environment (column 1 line 34-44), the anti-reflective coating is considered heat resistant)

Regarding claim 10, Macken teaches that said intervening space is occupied by a thermally insulating substance (Helium).

Regarding claim 11, Macken teaches that said thermally insulating substance is a gas (Helium).

Claims 1, 10-11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Rosenau, JR. et al. (US 3192575).

Regarding claim 1, Rosenau teaches an optical window assembly comprising:

(a) an outer window (30);

(b) an inner window (20);

(c) a housing (50), wherein said outer window (30) and said inner window (20) are mounted, said housing (50) holding said outer window (30) and said inner window (20) apart, thereby forming an intervening space (26) between said outer window (30) and said inner window (20).

(d) a coolant (28) occupying said intervening space; and

(e) a mechanism for cooling said coolant (column 2 line 2-5).

Regarding claim 10, Rosenau teaches that said intervening space is occupied by a thermally insulating substance (28, column 2 line 14).

Regarding claim 11, Rosenau teaches that said thermally insulating substance is a gas (28, column 2 line 14).

Regarding claim 13, Rosenau teaches that said windows are planar (figure 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 4, 6, 8-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher (US 5776612) in view of Rosenau.

Regarding claim 1, Fisher teaches an optical window assembly comprising:

(a) an outer window (42);

(b) an inner window (40);

(c) a housing (26), wherein said outer window and said inner window are mounted, said housing holding said outer window and said inner window apart, thereby forming an intervening space (70) between said outer window and said inner window.

(d) a coolant (air) occupying said intervening space.

However, Fisher fails to teach (e) a mechanism for cooling said coolant.

Rosenau teaches a mechanism for cooling a coolant between two windows (figure 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to adapt the window of Fisher with the window cooling mechanism as taught by Rosenau, since the cooling mechanism of Rosenau would further reduce heat generated from outside of the window so that inside components such as sensor would be protected from the heat.

Regarding claim 2, Fisher teaches that said outer window includes an outer surface facing away from said inner window and an inner surface facing towards said inner window, wherein said inner window includes an outer surface facing towards said outer window and an inner surface facing away from said outer window (figure 6), and wherein at least one of said surfaces is coated with an optical coating (48) that is substantially transparent in at least one wavelength bared selected from the group consisting of visible wavelength bands and infrared wavelength bands and that is

substantially opaque to electromagnetic radiation of radio and radar frequencies (column 5 line 1-3 and 13-22).

Regarding claim 4, Fisher teaches said optical coating is electrically conductive (column 5 line 15).

Regarding claim 6, Fisher teaches that said outer window includes an outer surface facing away from said inner window and an inner surface facing towards said inner window, wherein said inner window includes an outer surface facing towards said outer window and an inner surface facing away from said outer window, and wherein at least one of said surfaces is coated with an antireflective coating (72).

Regarding claim 8, Fisher teaches that said anti-reflective coating is heat resistant (since Fisher's anti-reflective coating is used in heated environment, the anti-reflective coating is considered heat resistant).

Regarding claim 10, Fisher teaches that said intervening space is occupied by a thermally insulating substance (Air).

Regarding claim 11, Fisher teaches that said thermally insulating substance is a gas (Air).

Regarding claim 13, Fisher teaches that said windows are planar (figures).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher as modified by Rosenau further in view of Biricik et al. (US 5173443).

Regarding claim 5, Fisher fails to teach that the optical coating includes at least one material selected from the group consisting of doped gallium arsenide and doped germanium.

Biricik teaches gallium arsenide coating used for transmitting infrared while providing good electroconductivity (column 3 line 55-62).

It would have been obvious to one of ordinary skill in the art at the time of the invention to adapt the optical coating of Fisher with the gallium arsenide coating as taught by Biricik, since the gallium arsenide coating would provide good infrared transmissivity while providing heat insulation (column 5 line 55-65) so that internal components such as sensor would be further protected.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher as modified by Rosenau further in view of Utreja et al. (US 4850275).

Regarding claim 9, Fisher as modified by Rosenau fails teach that said intervening space is occupied by a vacuum.

Utreja teaches an aircraft window cooling method by either pressurizing or evacuating (column 2 line 21).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the pressurizing window cooling mechanism of Fisher as modified by Rosenau with the evacuating cooling mechanism as taught by Utreja, since evacuating cooling mechanism would remove heat more effectively.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher as modified by Rosenau further in view of Crowther et al. (US 6180938).

Regarding claim 14, Fisher as modified by Rosenau fails to teach that said windows are curved.

Crowther teaches a super-sonic missile having curved window (24).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the window of Fisher with the curved window as taught by Crowther, since the curved window of Crowther would prevent wavefront aberration at the center of the field of view of a sensor (column 1 line 38-40). Further the curved window would reduce heat caused by air friction so that the sensor would be protected from the heat.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3, 9-10 and 38 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 4-6 of copending Application No. 10/736508. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are anticipated by the claims of the patent as follows:

Regarding claims 1-3, 9-10 and 38, the copending application claims an optical window assembly comprising:

(a) an outer window;

(b) an inner window;

(c) a housing, wherein said outer window and said inner window are mounted, said housing holding said outer window and said inner window apart, thereby forming an intervening space between said outer window and said inner window.

(d) a coolant occupying said intervening space; and

(e) a mechanism for cooling said coolant,

Wherein said outer window includes an outer surface facing away from said inner window and an inner surface facing towards said inner window, wherein said inner window includes an outer surface facing towards said outer window and an inner surface facing away from said outer window, and wherein at least one of said surfaces is coated with an optical coating that is substantially transparent in at least one wavelength bared selected from the group consisting of visible wavelength bands and infrared wavelength bands and that is substantially opaque to electromagnetic radiation of radio and radar frequencies,

Wherein, said inner surface of said inner window is coated with said optical coating,

Wherein, only said inner surface of said inner window is coated with said optical coating,

Wherein said interventing space is occupied by a vacuum, and

Wherein said interventing space is occupied by a thermally insulating substance

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoon Song whose telephone number is (571) 272-2494. The examiner can normally be reached on 8:30 AM - 5 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on (571) 272 - 2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HKS 2/22/05
HKS

EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER